Agricultural Systems **31** (1989) 399–401

CONTENTS OF VOLUME 31

Number 1

Special Issue on Expert Systems: Applications in Agriculture

Editorial 1

Agricultural Applications of Expert Systems Concepts 3
PIERCE JONES (USA)

FinARS: A Financial Analysis Review Expert System 19
W. G. BOGGESS, P. J. VAN BLOKLAND & S. D. MOSS (USA)

A Decision Model for Nutrition Management in Controlled Environment Agriculture 35
R. PETER FYNN, W. L. ROLLER & H. M. KEENER (USA)

Application of the GOSSYM/COMAX System to Cotton Crop Management . 55
J. M. McKINION, D. N. BAKER, F. D. WHISLER &
J. R. LAMBERT (USA)

Evaluation of SMARTSOV: An Expert Simulation System for Insect Pest Management 67
W. D. BATCHELOR, R. W. McCLENDON, D. B. ADAMS &
J. W. JONES (USA)

Dairy Herd Nutritional Analysis Using Knowledge Systems Techniques . . 83
A. DALE WHITTAKER, MICHAEL A. TOMASZEWSKI,
JEREMY F. TAYLOR, ROBERT FOURDRAINE (USA),
CORNELIUS J. VAN OVERVELD & RUDY G. SCHEPERS
(The Netherlands)

SELECT: An Expert System Shell for Selecting Amongst Decision or Management Alternatives 97
O. W. MORGAN, M. J. McGREGOR, M. RICHARDS &
K. E. OSKOUI (UK)

An Expert Database System for Ornamental Plants 111
HOWARD BECK, PIERCE JONES, DENNIS WATSON &
FEDRO ZAZUETA (USA)

An Artificial Intelligence Based Method for Scheduling Crop Management Actions 127
RICHARD E. PLANT (USA)

Agricultural Systems (**31**) (1989)—© 1989 Elsevier Science Publishers Ltd, England. Printed in Great Britain

Number 2

A Systems Approach to Improving Subsistence Yam Production in Central Province, Papua New Guinea 157
G. A. KING (Papua New Guinea)

International Science and the Research Needs of Agriculturally Dependant Communities in Southern Africa 169
MALCOLM J. BLACKIE (Malawi)

Pastoralist Strategies for Survival in Unpredictable Environments: A Model of Herd Composition that Maximises Household Viability 185
RUTH MACE & ALASDAIR HOUSTON (UK)

Interactive Effects of Grazing System Variables on Simulated Cattle Production and Stocking Rate of Bermudagrass (*Cynodon dactylon*) 205
R. L. SENFT & L. M. THAREL (USA)

Patterns of Water Availability for Sunflower Crops in Semi-Arid Central Argentina. A Simulation-Based Evaluation of Their Interactions with Cropping Strategies and Cultivar Traits 221
V. O. SADRAS & A. J. HALL (Argentina)

Number 3

Data Aggregation and Farm Risk Analysis 239
SIEGFRIED DEBRAH (Mali) & HARRY H. HALL (USA)

A Simulation Model of Bull Beef Production under Rotational Grazing in the Waikato Region of New Zealand 247
C. J. DOYLE (UK), J. A. BAARS & A. C. BYWATER (New Zealand)

Diversification, Productivity and Stability of Agroecosystems in the Semi-arid Pampas of Argentina 279
E. F. VIGLIZZO & Z. E. ROBERTO (Argentina)

Rice Production in the Rainforest in Zaire: An Analysis of The Smallholder Traditional Farming System in Yalibwa, Upper-Zaire 291
E. HUYBENS & E. F. TOLLENS (Belgium)

Economic Evaluation of Improved Management for Zebu Cattle in Northern Tanzania 305
PETER K. NGATEGIZE (Ethiopia)

Book Reviews 315

Number 4

Modelling the Economic Consequences of Potential Management Changes in a Mature Kiwifruit Orchard in New Zealand 321
C. J. DOYLE (UK), W. B. MOORE & R. F. HENZELL (New Zealand)

An Analytical Model of a Wheat Breeding Program 349
JOHN P. BRENNAN (Australia)

A Management Model that Helps Increase Profit on Western Australian Dairy Farms 367
G. R. OLNEY & G. J. KIRK (Australia)

Plant Nutrient Management Strategy Implications for Optimal Herd Size and Performance of a Simulated Dairy Farm 381
P. J. WESTPHAL, L. E. LANYON & E. J. PARTENHEIMER (USA)

Book Reviews 395